

MUL.KENS et al. — 10/719,065
Attorney Docket: 081468-0306886

REMARKS

Claims 1-62 are pending. By this Amendment, claims 1, 4, 9-12, 24, 25, 28, 36-38, 49-52, 54, 55 and 62 are amended. Reconsideration in view of the above amendments and following remarks is respectfully requested.

Entry of this Amendment is proper under 37 C.F.R. § 1.116 as the amendments: (a) place the application in condition for allowance for the reasons discussed herein; (b) do not add any additional claims without canceling a corresponding number of claims; (c) do not raise any new issues that would require further consideration and/or search; (d) satisfy a requirement of form expressly set forth in the previous Office Action (i.e. the objection to claims 1, 12, 24, 25, 39, 50-52, 54 and 55); and (e) place the application in better condition for appeal, should an appeal be necessary, by overcoming the objection to the claims. Entry of this Amendment is respectfully requested.

Claims 1, 12, 24, 25, 39, 50-52, 54 and 55 were objected to.

In the previous response, Applicants traversed the objection and requested clarification of the grounds of objection. The Examiner repeated the objection in the final rejection, and although required by MPEP § 707.07(f) to respond to Applicants' traversal, provided no answer.

In order to advance prosecution of the application, certain claims have been amended to change "volume" to "enclosure." It is respectfully noted that the instant specification uses other terms, such as "casing" and "chamber" to describe various aspects of the invention, however it is respectfully submitted that the use of "enclosure" fully obviates the objection. It is further respectfully submitted that as the Examiner has not provided any basis in either 35 U.S.C. or 37 C.F.R. for the objection, that the amendments to the claims are not in response to any requirement of patentability, but are merely in response to a requirement of form required by the Examiner.

With respect to claim 12, it is respectfully submitted that the amendment to the claim fully obviates the objection. Again, as no basis for the objection was provided, it is respectfully submitted that the amendment to claim 12 is not in response to any requirement of patentability, but merely in response to a requirement of form.

With respect to claim 39, it is respectfully noted that claim 39 does not recite an absorbent gas, but an interactive gas. The recitation of an interactive gas is fully supported, for example, in paragraphs [0078] – [0081].

MULKENS et al. — 10/719,065
Attorney Docket: 081468-0306886

Reconsideration and withdrawal of the objection are respectfully requested.

Claims 26, 29, 30, 39, 50, 51 and 56-61 were rejected under 35 U.S.C. §102(e) over Nishi (U.S. Patent 6,545,746). The rejection is respectfully traversed.

It is respectfully noted that claim 29 depends from claim 28, which was not rejected as anticipated by Nishi. Accordingly, it is respectfully submitted that claim 29 cannot be anticipated by Nishi. Similarly, it is respectfully noted that claims 56, 57, 60 and 61 depend from claims 24, 25, 54 and 55, which were not rejected as anticipated by Nishi. Therefore, claims 56, 57, 60 and 61 cannot be anticipated by Nishi. With respect to the Examiner's assertion that the claims are product-by-process claims, although Applicants understand that the patentability of such claims is determined based on the product, as the devices manufactured by the methods of claims 24, 25, 54 and 55 have a structure that is different than the prior art, and as there is no way to claim that structure other than by the method of its production, the Examiner is required to consider the structure produced by the method. See MPEP § 2113.

The Examiner again alleges that Nishi discloses a radiation-energy detector to determine energy of radiation passing through a region of interactive gas in column 29, line 55-column 30, line 9 and a concentration controlled volume of radiation absorbent gas to be traversed by a beam of radiation in column 45, lines 17-67. It is respectfully noted that independent claims 29 and 50 do not recite absorbent gas. It is also again respectfully noted that Nishi explicitly state in column 47, lines 33-34, that the helium (He) gas is not excited because it does not absorb the ArF excimer laser light.

Nishi discloses in column 29, lines 55-column 30, line 9 that the self-measuring device 31 processes detection signals and image signals from reflective light detecting systems 30a and 30b. The reflectivity of the wafer is monitored based on the amount of light reflected by fiducial mark member FM and illuminance non-uniformity is detected in the exposure area of the wafer. As clearly disclosed in column 29, lines 7-11, the self-measuring device 31 detects a positional relationship between the pattern on the reticle R and the fiducial pattern on the basis of the image signal in a state where the reticle R and the fiducial mark member FM are stationary. The self-measuring device 31 does not determine the energy of a beam of radiation, it does not comprise a sensor that provides an output signal that is proportional to an amount of interaction of the beam of radiation with a region of gas. In short, the self-measuring device 31 of Nishi does not correspond to the claimed radiation-energy detector.

MULKENS et al. -- 10/719,065
Attorney Docket: 081468-0306886

With respect to the Examiner's arguments on page 4 of the Office Action that "[t]he detector of Nishi detects beam of radiation passing through a region of interactive gas," it is respectfully noted that claims 26 and 50 do not claim detecting a beam of radiation passing through a region of interactive gas. Claim 26 recites a sensor providing an output signal that is proportional to an amount of interaction of the beam of radiation with the region of gas and claim 50 recites measuring the amount of interaction of the beam of radiation with the interactive gas. There is no element, system, device, apparatus, and/or process disclosed by Nishi that corresponds to these claimed features.

Reconsideration and withdrawal of the rejection over Nishi are respectfully requested.

Claims 1-62 were rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-23 of U.S. Patent 6,538,716. The rejection is respectfully traversed.

As discussed in the previous response, it is respectfully submitted that the Examiner has not performed the analysis required for a rejection under the judicially created doctrine of obviousness-type double patenting and has not presented a *prima facie* case. In particular, it is respectfully submitted that the Examiner's determination that "it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the radiation energy detector of the application to the claims of 716 in order to properly control radiation," does not point out the differences between the 62 claims of the application and the 23 claims of U.S. Patent 6,538,716, or explain why one of ordinary skill in the art would have determined the differences to be obvious.

The instant application contains 62 claims, including 10 independent claims, of varying scope and coverage. U.S. Patent 6,538,716 contains 23 claims, including 2 independent claims. It is respectfully submitted that the Examiner's mention of one claimed feature of the instant application, the radiation energy detector, and his hindsight determination that it would have been obvious to provide the feature to the claims of U.S. Patent 6,538,716 does not satisfy the analysis required by the MPEP or present a *prima facie* case. It is respectfully requested that the Examiner perform the analysis, at least with respect to the 10 independent claims of the instant application, or withdraw the rejection.

It is further respectfully submitted that the fact that the instant application claims priority to U.S. Patent 6,538,716 is not a sufficient basis for an obviousness-type double patenting rejection. Applicants are permitted by 35 U.S.C. § 120, and by all of the relevant, applicable case law regarding obviousness-type double patenting, to issuance of a patent for

MULKENS et al. -- 10/719,065
Attorney Docket: 081468-0306886

claims which are patentably distinct from the patent(s) to which priority is claimed without the encumbrances required by a Terminal Disclaimer. Applicants have presented claims patentably distinct from U.S. Patent 6,538,716 and are entitled to issuance of the instant application.

In view of the above amendments and remarks, Applicants respectfully submit that all the claims are allowable and that the entire application is in condition for allowance.

Should the Examiner believe that anything further is desirable to place the application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP



JOHN P. DARLING
Reg. No. 44482
Tel. No. (703) 770-7745

Date: December 12, 2005

P.O. Box 10500
McLean, VA 22102
Tel. No.: (703) 770-7900
Fax No.: (703) 770-7901